

Application No. 09/745,816

Filed: December 22, 2000

Group Art Unit: 1771

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a nonwoven fleece layer comprising a blend of natural fibers and synthetic fibers, a ratio by weight of natural fibers to synthetic fibers ranging between 95% natural fibers and 5% synthetic fibers to 50% natural fibers and 50% synthetic fibers; and

a backing fixed as a layer to the fleece layer, the backing having a greater strength and a greater dimensional stability than the fleece layer.

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3. The material of claim 1, further comprising a nonwoven fusible layer interposed between the fleece layer and the backing.

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5. The material of claim 1, wherein the fleece layer is needle punched to the backing.

6. The material of claim 5, wherein the fleece layer forms loops on an outer side of the backing.

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16. The material of claim 1, wherein the backing comprises a multi-filament polyester fiber layer and a polyester film layer.

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17. The material of claim 1, wherein the backing comprises a nonwoven material, a woven cloth, a film, a spunbond material, a scrim, or a loop fabric.

18. The material of claim 1, wherein the backing has a break strength greater than the fleece layer and an elongation at break less than the fleece layer.

23. The material of claim 1, wherein the backing is configured to fasten to a polishing, buffing, or finishing tool.

25. A buffing or polishing material comprising:
a nonwoven fleece layer comprising a blend of natural fibers and synthetic fibers;

a backing fixed to the fleece layer, the backing having a greater strength and a greater dimensional stability than the fleece layer; and

wherein the material has a break strength of at least 425 pounds per linear inch in the machine direction and an elongation at break of no more than 2%.

Please add the following new claims 26-47:

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26. A buffing or polishing material comprising:

a nonwoven fleece layer comprising a blend of natural fibers and synthetic fibers, the synthetic fibers comprising no more than 50% by weight of a ratio of natural fibers to synthetic fibers;

at least a portion of the synthetic fibers including fibers chemically bound to others of the synthetic fibers and the natural fibers;

the natural fibers and the synthetic fibers needle punched together;

a backing fixed as a layer to the fleece layer, the backing having a greater strength and a greater dimensional stability than the fleece layer; and

wherein the fleece layer is needle punched to the backing.

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27. The material of claim 26, further comprising a nonwoven fusible layer interposed between the fleece layer and the backing.

28. The material of claim 27, the nonwoven fusible layer further comprising a polyester material.

29. The material of claim 26, wherein the fleece layer forms loops on an outer side of the backing.

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30. The material of claim 26, wherein the ratio of natural fibers to synthetic fibers comprises 85% natural fibers and 15% synthetic fibers by weight of the fleece layer.

31. The material of claim 26, wherein the natural fibers of the fleece layer include wool, cotton, hemp, linen, flax, sisal, or jute.

32. The material of claim 26, wherein the synthetic fibers of the fleece layer include nylon, polyester, or aramid fibers.

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33. The material of claim 26, wherein at least a portion of the synthetic fibers of the fleece layer include mechanically binding fibers.

34. The material of claim 33, wherein the mechanically binding fibers comprise up to 45% by weight of the fleece layer.

35. The material of claim 26, wherein at least a portion of the synthetic fibers of the fleece layer include chemically binding fibers.

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36. The material of claim 35, wherein the chemically binding fibers comprise polyester fibers having a lower melting temperature than a remainder of the synthetic fibers or of the natural fibers.

37. The material of claim 35, wherein the chemically binding fibers comprise up to 5% by weight of the fleece layer.

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38. The material of claim 37, wherein a remainder of the synthetic fibers comprises up to 45% by weight of the fleece layer.

39. The material of claim 26, wherein the backing comprises a multi-filament polyester fiber layer and a polyester film layer.

40. The material of claim 26, wherein the backing comprises a nonwoven material, a woven cloth, a film, a spunbond material, a scrim, or a loop fabric.

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41. The material of claim 26, wherein the backing has a break strength greater than the fleece layer and an elongation at break less than the fleece layer.

42. The material of claim 26, wherein the density of the fleece layer is 4.2 lb/ft³ to 9.2 lb/ft³.

43. The material of claim 26, wherein the material has a break strength of at least 425 pounds per linear inch in the machine direction.

44. The material of claim 26, wherein the material has an elongation at break of no more than 2%.

45. The material of claim 26, wherein the material has a thickness between 0.17 inch to 0.50 inch.

46. The material of claim 26, wherein the backing is configured to fasten to a polishing, buffing, or finishing tool.

47. The material of claim 26, wherein the material is in the form of a disc, an endless belt, a flapwheel, or a spiral band.